



NEWSLETTER

INFORMATION & NEWS FROM ASHRAE

OTTAWA VALLEY CHAPTER

MARCH, 1980

P.O. Box 3123 Station "C" Ottawa, Ontario K1Y 4J4

MARCH MEETING

Date: March 18, 1980

Time
Social - 5:30 p.m.
Dinner - 6:45 p.m.
Meeting - 8:15 p.m.

Place
Cathay House, 228 Albert St. (upstairs)

An Energy Management/Solar Evening has been jointly arranged by The Energy Management/Technical and Education Committees.

Program starts at 4:30 p.m. at the site of the Confederation Heights Cafeteria. Mr. Don Hampton of the Education Committee will conduct a tour of this solar installation. The tour will include practical discussions of the collector array and piping installation details, as well as the computerized monitoring system. Parking is available behind the post office building on Riverside Drive and there is no charge for this demonstration. Please arrive promptly at 4:30 p.m.

The evening session will be highlighted by a discussion of the Orleans Energy Conservation Project by Mr. Rick Quirouette, Research Officer for National Research Council - Division of Building Research. Mr. Quirouette will present details of the conservation techniques used in each of the four homes (including heat pump and solar) and discuss the degree of success of each measure based on several years of experience.

The emphasis of the evening is definitely on the practical aspects of solar energy and conservation applications. Your participation in the discussions will be welcomed.

ASHRAE develops solutions - while others talk problems.

RESEARCH MAKES THE DIFFERENCE

Fifty years before the energy crisis ASHRAE was researching the thermal characteristics of buildings. We who are in the heating, refrigerating and air conditioning industries benefitted. We will continue to benefit from ASHRAE research as long as we support it.

RESEARCH MUST BE FUNDED

Companies will be contacted by your committee and asked to invest but as an individual you will have to come forward and offer your investment in ASHRAE RESEARCH. Your tax deductible contribution today will prepare us for tomorrow's challenge. Please write a cheque to ASHRAE RESEARCH CANADA and mail it to the Chapter Postal Box, or better yet, bring it to the March meeting.

SUPPORT ASHRAE RESEARCH

Committee Members: Bob McKee, Chairman.
Al Oakes, Jim Black, George Carscallen,
Jim Gregory, Ed. Butterworth, Mike
Sheehy, Dave Eastwood.

NOMINATING COMMITTEE REPORT

The Ottawa Valley Chapter Nominating Committee is proposing the following slate of officers for the 1980-81 Chapter Board of Governors.

President	Ray Young
Vice-President	Roy Beckman
Secretary	Dalton McIntyre
Treasurer	Jim Gregory
Board of Governors	John Jones
	Marv Whalen
	Don Cruickshank
	Kelvin Finch
	Frank Vaculik
	Pat Durkin

All of the above are Chapter members in good standing and have indicated their willingness to serve in the positions indicated.

Any Chapter member may be nominated from the floor at our May meeting if the member has indicated, in writing, that he is a Chapter member in good standing and will let his name stand for election.

SUCCESSFUL FIELD TRIP

The ASHRAE sponsored Field Trip and Lecture, held in the East Block of the Parliament Buildings on February 20th was well handled and was appreciated by the 35 students and 10 ASHRAE regular members.

Four groups, each with approximately 10 persons plus an engineer guide, were shown the basement the upper floors, which are being renovated. A great deal of trouble is being taken to insure that the "HERITAGE" aspect of the building is preserved.

Following the tour, a one hour talk was given by Mark Clemmans, and Noel Brown, of Clemiman Large Patterson, re the steps taken to study the building prior to work commencing and the follow through required to install all new mechanical systems.

A most interesting technical feature was the old "Vault and Common" heating system which no doubt the "old timers" would remember, but now we have 45 more in the know.

OBITUARY

WARREN MILLER - a life member of ASHRAE and long time member of Ottawa Chapter passed away in his 70th year on February 15, 1980, at his residence. Mr. Miller was born in Western Canada, graduated from University of Manitoba, was in the R.C.A.F. during W.W. II, and since then has worked in Toronto and Ottawa in our industry.

Our condolences are extended to his family.

From all that has been said and written in recent months about the proposed Northern Pipelines to transport oil and gas to the American and Canadian markets, a casual observer would assume that Canada's energy difficulties are relatively simple and straightforward.

These problems appear to be, (a) how to finance the exploration for new deposits of gas and oil and (b) how to locate the necessary pipelines for their transportation with the least damage to the ecology and disruption of the life style of our native peoples.

Problem (a) is being solved by continually raising the price of gas and oil to the consumer.

Problem (b) is hopefully going to be solved by negotiation.

However, if one probes this whole situation a little further it is quite obvious that finding new reserves of fossil fuel is only a stopgap solution at best. Even if we were to find much more oil and gas in Canada's north than our most optimistic estimates indicate, this would still be only a temporary solution to our energy problem.

What we urgently need to do, therefore, is to get busy on utilizing renewable resources of energy which would, if properly exploited, place us in a position of providing our energy needs indefinitely from renewable and inexhaustible sources, which originate in one form or another from solar energy. Fossil fuel is a form of stored solar energy available in limited amount.

It has been estimated that the world reserves of economically exploitable non-renewable fossil resources are 213 Q, and nuclear resources 69 Q for the total of 282 Q (Q equal to 1 million trillion BTU's).

The current world rate of energy consumption is 0.225 Q annually. It is expected that this rate will double approximately every ten years, so that in less than 100 years the entire reserve of non-renewable fossil resources will be exhausted. In order to slow the drain on the non-renewable fossil resources, it will be necessary to use nuclear energy as a means of buying time until the renewable resources and the fusion reactor using heavy water are developed.

The question is, what are we doing to harness the vast amount of renewable energy which is available to us? The answer is, practically nothing. Unfortunately, we are only looking at the short term picture and in our scramble for the almighty dollar we are looking at immediate profits to be made from the discovery and sale of oil and gas, and to lesser extent nuclear energy, without taking effective steps to provide for the future.

Each year the earth's surface absorbs about 2,400 Q of solar energy. In other words, in less than six weeks, the earth receives from the sun an amount of energy equal to the presently known world reserve of non-renewable energy of 282 Q. Only a fraction of this energy would satisfy our present or future needs. In addition solar energy is virtually pollution free and widely distributed and no one can claim or take out a lease on solar energy. It is a comparatively simple matter to make use of this energy. Present technology can produce solar heating and cooling systems for homes and also for commercial and industrial buildings which will reduce the demand on fossil fuels.

By research, the efficiency of these existing systems can be improved and once we have installed heating and cooling systems powered by solar energy there is no energy cost from that point on. As for critics who say that installing this type of energy using equipment is too expensive and not affordable, we could pose the question, can we afford not to exploit this never-ending source of energy?

In the past, it has always been felt that since energy from fossil resources was cheap and virtually inexhaustible, there was no point in attempting to utilize other energy sources. In addition to this, vested interests such as oil and gas companies did not encourage any research into other energy resources, and the federal government only recently has seen the need for alternative energy sources and is now providing funds for research into solar energy and related resources.

The total estimated cost of the Alaskan Highway Pipeline is ten billion dollars. If this money were diverted to the production of equipment for the utilization of solar energy with the present technology, we would greatly reduce our dependence on the fossil fuel resources, which should only be used for petrochemical feedstocks, air transportation and in other areas where no present alternatives exist. The designing, manufacturing, installing and servicing of this equipment would create jobs for a large number of people, more than the jobs created to build the pipeline. Moreover, these jobs would be of a permanent nature rather than the boom and bust economy of a pipeline construction project. In addition to these advantages, damage would not be done to the ecology, and the life style of our native peoples would remain intact.

From this, it appears obvious, that unless our way of life as we know it, is to change completely within the foreseeable future we must get busy in developing means to exploit the abundant amount of renewable energy which we receive free each day from the sun and related sources.

J. Lunde

ANNUAL SEMINAR

The energy conservation committee is having a seminar to be held at Carleton University on April 18.

The seminar will be based on actual conservation projects, which have been implemented and the savings obtained.

Also there will be a panel review on fuels for today and the future.

More information to follow on the eighteenth at the meeting.

John Jones

NEW MEMBERS

We welcome the following new members:

- A. K. Nijhawan
- Daniel K. S. Fong
- DANA C. COYLE
- Guy Chenir

"CAN YOU SPARE A HANDBOOK?"

- for a student?
- most Ashrae members have one or two pre-1976 Handbooks, which lay unused on a shelf.
- Here's your chance to assist a student at Carleton, Ottawa U, Algonquin or Queens.
- We know you will respond - so bring your old manuals to the meeting on March 18th.
- For you BIG donors with a DOZEN, call Keith Murfin, 226-3300.